			AL/
	Application No.	Applicant(s)	
A	09/973,057	IKEDA, TAKASHI	
Notice of Allowability	Examiner	Art Unit	
	VanThu Nguyen	2824	
The MAILING DATE of this communication appe All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI	(OR REMAINS) CLOSED in this ap or other appropriate communication GHTS. This application is subject t	plication. If not include n will be mailed in due o	d course. THIS
1. \boxtimes This communication is responsive to <u>RCE and amendment</u>	filed on 06/09/2004.		
2. The allowed claim(s) is/are 1-9,12 and 16.			
3. The drawings filed on 10 October 2001 are accepted by the	e Examiner.		
4.	been received. been received in Application No cuments have been received in this of this communication to file a reply ENT of this application. tted. Note the attached EXAMINER as reason(s) why the oath or declara t be submitted. on's Patent Drawing Review (PTO- Amendment / Comment or in the Comment or in the Comment of the drawing the header according to 37 CFR 1.121(control of BIOLOGICAL MATERIAL researched)	national stage applicat complying with the req 'S AMENDMENT or Notion is deficient. 948) attached Office action of ngs in the front (not the d). must be submitted. N	uirements DTICE OF
Attachment(s) 1. ☐ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3. ☑ Information Disclosure Statements (PTO-1449 or PTO/SB/08 Paper No./Mail Date 06/09/04 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	5. ☐ Notice of Informal P 6. ☐ Interview Summary Paper No./Mail Dat 7. ☒ Examiner's Amendr 8. ☒ Examiner's Stateme 9. ☐ Other	(PTO-413), te ment/Comment	vance

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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

The application has been amended as follows:

Replace claim 12 with:

-- A MRAM comprising a plurality of magnetoresistive films on a substrate, each of said

magnetoresistive films in which at least a first magnetic layer, a second magnetic layer, a

nonmagnetic layer, a third magnetic layer, and a fourth magnetic layer are stacked in the order

named,

wherein at least said first magnetic layer comprises Gd and said fourth magnetic layer

comprises at least one of Tb or Dy,

wherein each of said first magnetic layer and fourth magnetic layer has an easy axis of

magnetization along a perpendicular direction to a film plane, and the second magnetic layer and

the third magnetic layer have a greater spin polarization than the first magnetic layer and the

fourth magnetic layer, and

wherein said second and third magnetic layers are magnetic layers comprising at least Co

and Co contents thereof are not less than 20 at.% nor more than 90 at.%.--

Allowable Subject Matter

2. Claims 1-9, 12, 16 are allowed.

The following is an examiner's statement of reasons for allowance:

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The prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Mao et al., Hayashi et al., and Chen et al., taken individually or in combination, do not teach the claimed invention having the following limitations:

wherein at least said first magnetic layer comprises Gd and said fourth magnetic layer comprises Tb or Dy; and wherein each of said first magnetic layer and fourth magnetic layers has an easy axis of magnetization along a perpendicular direction to a film plane, and a second magnetic layer and the third magnetic layer have a greater spin polarization than the first magnetic layer and the fourth magnetic layer; or

wherein each of said first magnetic layer and fourth magnetic layers has an easy axis of magnetization along a perpendicular direction to a film plane, and a second magnetic layer and the third magnetic layer have a greater spin polarization than the first magnetic layer and the fourth magnetic layer; and wherein said second and third magnetic layers are magnetic layers comprising at least Co and the Co contents thereof are not less than 20 at. % nor more than 90 at. %.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VanThu Nguyen whose telephone number is (571) 272-1881. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 10, 2004

VanThu Nguyen
Primary Examiner
Art Unit 2824